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BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

In the Matter of	)	
	)	
Satellite Delivery of Network Signals	)	CS Docket No. 98-201
to Unserved Households for	)	RM No. 9335
Purposes of the Satellite Home	)	RM No. 9345
Viewer Act	)	
	)	
Part 73 Definition and Measurement	)	
of Signals of Grade B Intensity	)	

To: The Commission

**REPLY COMMENTS OF THE NATIONAL ASSOCIATION OF BROADCASTERS**

DATED: December 21, 1998

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**Introduction and Summary<sup>1/</sup>**

In its NPRM, the Commission outlined a possible regulatory change -- a potential "redefinition" of Grade B intensity to require a signal more than 10 times stronger than under current law -- that would do grave damage to localism and the network/affiliate relationship, and hand an enormous bounty to adjudicated scofflaws such as PrimeTime 24. See NPRM, ¶¶ 27-28 (discussing possible increase in Grade B intensity to nearly Grade A levels). As NAB discussed

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<sup>1/</sup> NAB is a nonprofit incorporated association of television and radio stations and broadcast networks that serves and represents the American broadcast industry. NAB hereby incorporates by reference all of the filings and supporting materials provided to the Commission during the period when it was considering issuing this NPRM. For example, on July 17, 1998, NAB filed copies of both the original and supplemental Expert Reports of Jules Cohen in CBS Inc. v. PrimeTime 24, as exhibits to NAB's preliminary response to NRTC's petition for rulemaking.

in detail in its initial comments, the Commission is utterly without power to rewrite the Copyright Act at all, much less in that radical way.

In their comments, the satellite industry, led by Satellite Broadcasting & Communications Association, contend that the Commission should not merely attack localism, but attack it with nuclear weapons. If actually implemented, the satellite industry's proposals would mean that instead of the small number of rural households that Congress intended to be eligible to receive distant network signals, more than 80% of the populated land area of the United States, with a minimum of 95 million subscribers -- mostly in urban and suburban areas -- would suddenly be deemed "unserved" and handed over to copyright infringers such as PrimeTime 24. To illustrate the stunning impact of SBCA's revolutionary proposals, maps prepared by Decisionmark conservatively estimating their impact for a typical national network (CBS) are reprinted on the two pages following this summary. The true impact would be even more shocking, because even these maps do not take into account all of the coverage-shrinking devices proposed by the satellite industry.

The satellite industry's proposals would, over time, eviscerate the network/affiliate system as it now exists and silence the local voices that it has facilitated in communities across the nation. Broadcaster comments submitted to the Commission are replete with examples of the adverse impact the satellite industry proposals would have on localism:

- Station KMBC's recent investment of \$900,000 to update its weather-reporting facilities to provide timely information to its viewers about impending tornados and other weather disasters would be at risk.

- Station WVEC in Hampton, Virginia, provided continuous weather updates during Hurricane Bonnie in August 1998, including emergency reports and warnings for viewers throughout its Grade B area. Stations such as WVEC simply could not afford such coverage if their revenues were slashed through loss of viewers to distant stations.
- New Mexico stations' system of translators to provide free over-the-air service to rural residents -- a large percent of whom are low income -- would be imperiled.

The comments of other broadcasters contain many additional examples of what is at stake in these proceedings -- the ability of viewers nationwide to receive free programming, including local news, public service information, and emergency warnings about their own communities.

The Commission cannot and should not adopt these proposals. As to the definition of Grade B intensity, the Commission has repeatedly (and very recently) reaffirmed that the current Grade B intensity values are entirely appropriate. If the Commission could revisit the issue now for SHVA purposes -- which it cannot -- it should reach the same conclusion.

As to predictions of Grade B intensity, if the Commission wishes to suggest a predictive model to Congress and the courts, it should offer its standard Longley-Rice model used in the DTV proceeding, which has since been validated through more than 500 actual field measurements of randomly selected satellite subscribers. The satellite industry's claims that Longley-Rice is inaccurate, by contrast, are supported by *no data whatsoever*.

With regard to measurements of Grade B intensity, the Commission may wish to suggest use of a simplified measurement method, but must reject the satellite industry's bogus proposals designed falsely to portray served households as unserved. For example, the Commission must reject the satellite industry's completely unscientific suggestions that signal intensity be measured with unknown (and potentially defective) equipment, that signals be split in two (or three or four) before being measured, that antennas should be deliberately misoriented for testing purposes, or that satellite technicians be permitted to choose a single (potentially unrepresentative) location at which to measure signals, rather than employing the Commission's standard five-point cluster approach.

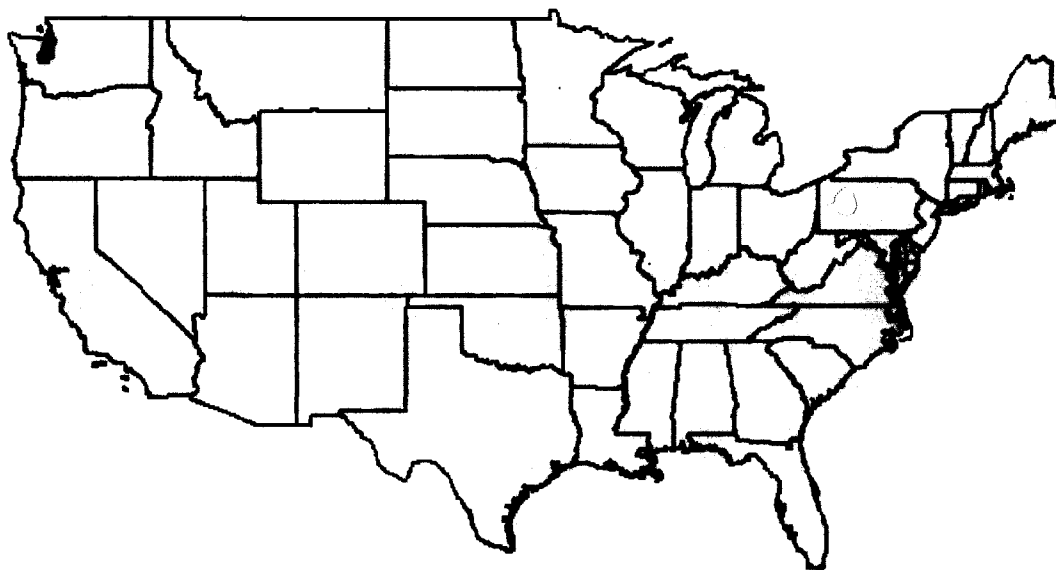
The Commission should also decline PrimeTime 24's invitation to urge Congress to abolish the "unserved household" limitation and permit satellite carriers to sell distant network signals to anyone, for a government-set fee. There is no basis whatsoever for the government to force broadcast networks to abandon the local, over-the-air distribution system that has brought free television to more than 200 local communities throughout the United States in favor of a handful of regional or national "superstations." Indeed, such a system would be the antithesis of localism, which, as the NPRM observes (at ¶ 36), "is central to our policies governing broadcasting and the obligation of broadcasters to serve the public interest."

Finally, the Commission's just-released summary of its 1998 competition report (and the accompanying statements of all five Commissioners) establish two key points. First, the Commission's summary (and the statements by Commissioners) show that DBS is doing extraordinarily well in head-to-head competition with cable, without any need to subvert the

Copyright Act. Second, the statements by Commissioners correctly reflect that what is needed is to enhance delivery of local network stations to local viewers, both through a new local-to-local legal regime and through use of existing (and enhanced) over-the-air antenna technology.



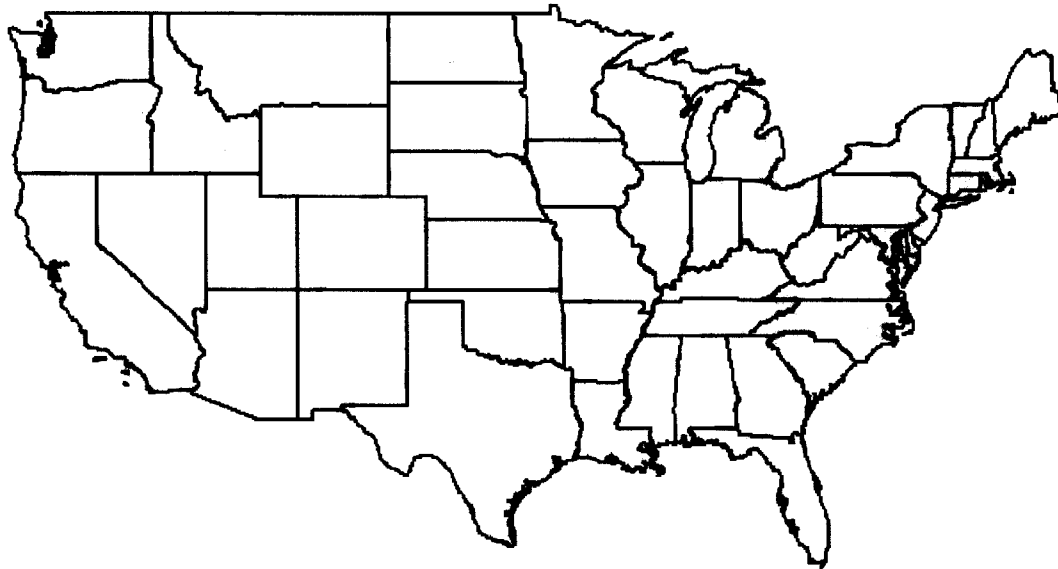
CBS Network National Coverage Using *Existing* Definition  
of Grade B Intensity and *Standard* Prediction Parameters\*



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\*Grade B intensity = 47/56/64 dBu for low-VHF, high-VHF, and UHF; Longley-Rice parameters = 50% Location, 50% Time, 50% Confidence

CBS Network National Coverage Using *SBCA Proposed* Definition  
of Grade B Intensity and *SBCA Proposed* Prediction Inputs\*



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\*Grade B intensity = 70.75 / 76.5 / 92.75 dBu for low-VHF, high-VHF, and UHF; Longley-Rice parameters = 50% Location, 90% Time, 90% Confidence

**I. DEFINING GRADE B INTENSITY**

**A. There Is An Existing Definition of Grade B Intensity for SHVA (and All Other) Purposes**

PrimeTime 24's contention that the Commission has never defined "Grade B intensity" for purposes of the SHVA, PrimeTime 24 Comments at 6-7, is false. As two courts have already held -- one in a final judgment -- Congress specifically adopted in Section 119(d)(10) of the Copyright Act the "Grade B" signal intensities long published in 47 C.F.R. § 73.683(a) as the controlling standard for SHVA purposes. CBS Inc. v. PrimeTime 24 Joint Venture, 9 F. Supp.2d 1333, 1340 n.8 (S.D. Fla. 1998); ABC, Inc. v. PrimeTime 24 Joint Venture, 17 F. Supp.2d 467, 472 (M.D.N.C. 1998).<sup>2/</sup>

**B. The Commission Lacks Authority to Alter the Intensities Adopted By Congress as an Integral Part of its Legislative Compromise**

As discussed in detail in NAB's initial comments, only Congress, and not the Commission, has the power to alter the central genetic code of the Satellite Home Viewer Act: the definition of Grade B intensity. A contrary finding would mean that the Commission, which has been given no authority whatsoever by Congress to administer the Copyright Act, would have the power to unravel the compromise carefully stitched by Congress to modify the copyright law just enough to enable network programming to be delivered by satellite to a very

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<sup>2/</sup> In its Denver complaint (¶ 14), EchoStar specifically concedes the point: "The Federal Communications Commission's definition of Grade B intensity referenced in the SHVA can be found at 47 C.F.R. § 73.683(a). It is: 47 dBu for channels 2-6, 56 dBu for channels 7-13, and 64 dBu for channels 14-69."

small number of almost entirely rural “unserved” households. See NAB Initial Comments at 12-22.<sup>3/</sup>

**C. Every Consideration of Appropriate “Grade B” Intensities -- Including the Work of the DTV Advisory Committee Adopted by the Commission Earlier This Year -- Has Endorsed Essentially the Current Definition**

Satellite carriers propose that the Commission rewrite the definition of Grade B intensity to permit them to usurp, through a governmentally-mandated taking of property, the right to deliver costly, copyrighted television programs such as “Dharma & Greg,” “60 Minutes,” “Ally McBeal,” and “ER” to tens of millions of currently ineligible urban and suburban customers.

The satellite industry’s arguments for rewriting the SHVA to their liking are largely grounded in an Engineering Statement by Hatfield & Dawson (“H&D Eng. Statement” or “H&D”), filed as an exhibit to SBCA’s comments.<sup>4/</sup> That statement proposes (at Appendix 2) “low” and “high” dBu figures that H&D suggest the Commission consider as a “range” for new Grade B signal intensities. H&D Eng. Statement at Appendix 2. The “high” figures are in each

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<sup>3/</sup> As to the handful of additional authorities that commenters such as DirecTV mistakenly cite as support for the Commission’s power to rewrite the Copyright Act, we refer the Commission to the reply comments being filed today by the ABC, CBS, Fox, and NBC Affiliates Associations.

<sup>4/</sup> PrimeTime 24 submits a separate engineering statement from William Hassinger that contains similar erroneous proposed inputs. For example, like Hatfield & Dawson, Mr. Hassinger ignores the tremendous reductions in receiver noise since the 1950s, and asks the Commission to set a signal-to-noise ratio that is appropriate for a “fine” picture rather than the “acceptable” picture that is the Grade B benchmark. See Section I(D) below.

case greater than the Commission's current definition of Grade A intensity.<sup>5/</sup> Notably, although SBCA and the other satellite commenters generally argue for using the "high" figures listed by H&D, the engineers themselves do not do so. See id. at 4-5 (asserting that specified "range" is more appropriate, but not endorsing high figures).

As all parties agree, the current Grade B intensity values derive from "planning factors" originally devised by the Commission in the early 1950s. Hatfield & Dawson claim that since that time, the "most significant FCC analysis [of appropriate Grade B planning factors] is contained in the 'UHF Comparability Study'" prepared in 1979-80, and state that "the Commission staff [there] determined that 4 of the 7 planning factors for Grade B determination

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<sup>5/</sup> Compare H&D Eng. Statement, Appendix 2 (Grade B intensity would be redefined as 70.75 dBu, 76.5 dBu, and 92.75 dBu for low VHF, high VHF, and UHF) with 47 C.F.R. § 73.683(a) (Grade A intensity defined as 68 dBu, 71 dBu, and 74 dBu).

NAB's initial comments contained both charts and maps showing the devastating harm that would be done by switching from Grade B to Grade A signal intensity as the test for SHVA eligibility. Many other commenters provided similar evidence. See, e.g., Comments of Hearst-Argyle Television, Inc. (Dec. 11, 1998), at 18 (KCRA would lose nearly 56% of its viewers -- or a potential loss of more than 3.8 million viewers. So, "for KCRA, *considered alone*, the potential in lost households (more than one million) is more than the total number of unserved households in network 'white areas' in the entire nation."); Comments of Mt. Mansfield Television, Inc. (Dec. 11, 1998), at 3 (WCAX would lose almost 100,000 households); Comments of KEYC-TV (Dec. 11, 1998), at 2 (KEYC would lose 47,475 households).

Notably, only a few months before Congress approved the SHVA in 1988, the FCC expressly condemned the notion that it would be permissible to use Grade A rather than Grade B coverage areas to determine where signals are actually available for viewing. See Amendment of Parts 1, 63, and 76 of the Commission's Rules to Implement the Provisions of the Cable Communications Policy Act of 1984, Second Report and Order, FCC 88-128, 3 F.C.C. Rcd. 2617 ¶ 18 (released April 29, 1988) ("the higher level Grade A standard significantly underestimates signal coverage and, therefore, would be unacceptable as a standard for gauging signal availability.") (emphasis added).

should be revised.” Id. at 4. Crucially, however, the Commission has never seen fit to modify the definition of Grade B intensity, despite numerous studies of the topic, including a recent and careful review by the DTV Advisory Committee. Moreover, the 1980 UHF Comparability Study championed by Hatfield & Dawson -- like every other “holistic” analysis of the matter -- concluded that the current Grade B figures are essentially correct.

For example, the UHF Comparability Study praised by Hatfield & Dawson itself concludes that modifications to “update” the planning factors “tend to cancel one another in the high and low VHF bands, and revised values for the required Grade B signal level do not appear particularly warranted here.”<sup>6/</sup> Even as to UHF, the staff Comparability Report tentatively suggested an increase of 6 dB -- which, for good reasons, the Commission has never in fact adopted<sup>7/</sup> -- and not the shocking 28.75 dB increase advocated by satellite industry lawbreakers.

More recently, Working Party 3 of the Advisory Committee on Advanced Television Service concluded that the current Grade B intensity values should be continued without change -- a recommendation the Commission accepted and relied on in establishing digital TV allocations that replicate the current coverage areas of analog TV stations. See Engineering Statement of Jules Cohen, ¶ 7 (“Cohen Eng. Statement”). The Advisory Committee

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<sup>6/</sup> Staff Report, Comparability For UHF Television: A Preliminary Analysis, 180-83 (Sept. 1979) (emphasis added), incorporated by reference in Final Staff Report, Comparability for UHF Television, 246 (Sept. 1980) (“The rationale behind the modifications [to Grade B intensity] is given in Appendix B to our earlier report”).

<sup>7/</sup> For example, the UHF Comparability Report used planning factors based on high UHF receiver noise figures from 1972, which were then (1979-80) becoming outdated and are now completely obsolete. See Section I(D)(1) below.

and the FCC were obviously aware of all of the considerations that might warrant raising or lowering the definition of Grade B intensity, id., but sensibly chose to make no change.

The following is a brief summary of Commission or staff analytical reviews of the Grade B planning factors:

<b>Study</b>	<b>Grade B for Low-VHF Channels (dBu)</b>	<b>Grade B for High VHF Channels (dBu)</b>	<b>Grade B for UHF Channels (dBu)</b>	<b>Net Change from Current FCC Figures (dB)</b>
<b>FCC (1952)</b>	47	56	64	----
<b>Kalagian, A <u>Review of the Technical Planning Factors for VHF Television Service</u> (1977)</b>	44 or 45	54-56	--	Low VHF: -2 or -3  High VHF: -2 or 0  UHF: --
<b>UHF Compatibility Report (1980)</b>	47	56	71	Low VHF: 0 High VHF: 0 UHF: +7
<b>DTV Advisory Committee, Working Party 3 (1993) / FCC DTV Ruling (1998)</b>	47	56	64	Low VHF: 0 High VHF: 0 UHF: 0

**D. If the Commission Had the Authority to Modify  
“Grade B Intensity” for SHVA -- Which It Does Not --  
The Evidence Supports Lowering, Not Raising, dBu Levels**

The inputs proposed by the satellite industry for determining Grade B intensity are based on manifestly incorrect figures for the Grade B planning factors. As NAB has previously discussed, the Commission lacks the authority to alter the meaning of Section 119 of the Copyright Act by redefining Grade B intensity either up *or* down for purposes of that statute. But if the Commission did have the power to revisit the planning factors analysis yet again (after having just done so for DTV), any change would logically need to reduce, not increase, the dBu levels that are considered “Grade B.”

The erroneous inputs suggested by Hatfield & Dawson are in four areas: (1) receiver noise figure, (2) required signal to noise ratio, (3) receiver antenna gain, and (4) line loss. In plain English, SBCA asks the FCC to strip local stations of their network program exclusivity with respect to huge numbers of viewers they now serve by:

- ignoring the vast reductions in receiver noise that have been achieved through technological improvements between the 1950s and the 1990s;
- pretending that a Grade B intensity signal is supposed to produce a “fine” (rather than an “acceptable”) picture;



- falsely assuming that consumers at the edge of station coverage areas use antennas far less powerful than are universally recommended by manufacturers and installers for use in those areas; and
- miscalculating the signal strength actually available in the air above a household's rooftop by dividing the signal strength in half.

We discuss each of these erroneous inputs advocated by the satellite industry, and then summarize the conclusions the Commission would reach from a rational "revisiting" of Grade B intensity.

1. **Receiver noise figure:** the Hatfield & Dawson "high" Grade B intensity estimate relies on receiver noise figures of 12, 12, and 14 dB for low VHF, high VHF, and UHF channels respectively. These figures, which reflect the relatively primitive technology of the 1950s, have been out of date for at least 20 years, as reflected in both the 1977 Kalagian study and the 1980 UHF Comparability Report cited by Hatfield & Dawson. The proposed planning factors set forth in Kalagian and the UHF Comparability Study rely on receiver noise figures of 6, 7, and 12 dBu for low VHF, high VHF, and UHF respectively -- reflecting substantial reductions in receiver noise between the 1950s and the mid-1970s. (These are the "low" figures quoted by Hatfield & Dawson.)

The 6/7/12 figures themselves are now plainly too high, at least for UHF. Based on testing around 1980 of "almost 200 television receiver[s]" meeting the FCC's then-new noise

requirements, "[t]he overall [receiver noise] average . . . was 9.03 dB."<sup>8/</sup> Thus, appropriate planning factors for the receiver noise figure should not exceed 6, 7, and 9 for the three channel ranges -- and are no doubt lower today given advances in technology.<sup>9/</sup> These numbers are equal to the "low" figures quoted by Hatfield & Dawson for VHF, and below those figures for UHF.

2. **Required signal to noise ratio:** Hatfield & Dawson's planning factors chart contains a "high" signal-to-noise ratio figure of 43 dB, and a "low" figure of 36 dB. In their statement, however, Hatfield & Dawson assert that the correct signal-to-noise ratio for a picture "acceptable" to the median observer -- the type of picture a "Grade B" signal is expected to produce under certain circumstances, see NPRM ¶ 4 -- is not 43 dB but either 34 or 36 dB. H&D Eng. Statement at 4.<sup>10/</sup> The "high" 43 figure cited by Hatfield & Dawson is based on the

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<sup>8/</sup> Comparability for UHF Television: Final Report at 89 n.11; see Television Receiver Equipment Grading, 47 Fed. Reg. 35014, 35015-16 (1982) ("The UHF Comparability Task Force has previously determined that the noise figure of receivers meeting our present standards averages 9 dB.").

In setting forth proposed planning factors, the UHF Comparability Task Force used the older 12 dB average noise figure based on data from 1972 about average noise levels. Compare Comparability for UHF Television: Final Report at Table B-2 (proposed planning factors) with id. at 89 (citing study showing average noise levels of 12 dB for UHF receivers as of 1972). New receivers being manufactured as of 1979-80, however, were 3 dB less noisy on average. Id. The Task Force presumably used the older figure because many TV sets being used in 1979-80 were older, noisier models. In 1998, however, there is obviously no reason to rely on long-outdated 1972 noise figures.

<sup>9/</sup> See id. at 78 ("th[e] lowering of television receiver noise can be expected to continue . . .").

<sup>10/</sup> See also Comments of Hammett & Edison, at ¶ 10 ("H&E Comments") ("a greater carrier-to-noise ratio, such as 36 dB, is likely appropriate in today's consumer market.").

signal intensity said to be necessary to produce a “fine” picture, see Cable Television Technical and Operational Requirements, FCC 92-61, 7 F.C.C. Rcd. 2021, 2027 ¶ 38 (released March 4, 1992), which is a full step *above* an “acceptable” picture on the TASO scale. Id. Since the Commission has always defined Grade B intensity in terms of an “acceptable” picture, see NPRM ¶¶ 4, 27, the signal-to-noise ratio needed to generate a “fine” picture is completely irrelevant here; the highest rational signal-to-noise figure that could possibly be justified for “Grade B” intensity is 34 or 36 dB.<sup>11/</sup>

3. **Receiver antenna gain:** For the reasons discussed in detail below, Hatfield & Dawson's suggested inputs for antenna gains are unrealistically low.

To determine appropriate figures for receiver antenna gain, it is crucial to begin with the Commission's description of the intended function of “Grade B intensity”:

Grade B represents the field strength of a signal 30 feet above ground that is strong enough, in the absence of man-made noise or interference from other stations, to provide a television picture that the median observer would classify as “acceptable” using a receiving installation (antenna, transmission line, and receiver) typical of outlying or near-fringe areas.

NPRM, ¶ 4 (emphasis added).

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<sup>11/</sup> As the ABC, CBS, Fox, and NBC Affiliates Associations explain in their Reply Comments filed today, there is strong reasons to retain the original planning factor's 30 dB signal-to-noise standard, which was endorsed as appropriate by both Kalagian and the UHF Comparability Report for broadcast television long after the cable figure had been raised to 36 dB.

In other words, what is relevant is the type of receiving equipment -- necessarily including, given the language of SHVA, a rooftop receiving antenna -- that is appropriate for use in a rural setting at the outer edges of a station's coverage area. As the Commission has observed, "[p]ersons living in areas located in the outer reaches of service areas of broadcast stations (for example, at the edge of a predicted Grade B contour) can, and generally do, take relatively simple measures such as installation of an improved roof-top antenna and careful location and orientation of that antenna to enhance their off-the-air reception."<sup>12/</sup> More specifically, the Commission pointed out in 1980 that "the maturation of home rooftop antenna technology to provide a more consistently high quality antenna means that today rural viewers are now more likely to employ a receiving antenna superior to their 1952 counterpart."<sup>13/</sup> There is, obviously, no reason to expect rural viewers who wish to receive over-the-air signals to use worse equipment today than in 1980.<sup>14/</sup>

Since the FCC's 1952 planning factors assumed gains of 6, 6, and 13 for low VHF, high VHF, and UHF respectively, the Commission's 1980 finding means that outlying viewers who wish to receive over-the-air signals are likely to use an antenna with at least those

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<sup>12/</sup> In re Amendment of Parts 1, 63, and 76 of the Commission's Rules to Implement the Provisions of the Cable Communications Policy Act of 1984, FCC 84-1296, 3 F.C.C. Rcd 2617, ¶ 18 (released April 29, 1988) (emphasis added).

<sup>13/</sup> In re Table of Television Channel Allotments, FCC 80-545, 83 F.C.C.2d 51, 84 (released Oct. 21, 1980) (emphasis added).

<sup>14/</sup> See Comments of Richard P. Biby, Biby Engineering Services (Dec. 11, 1998) ("It is quite true that the chimney or tower mounted antenna is still popular and widely used in more rural areas. This type of antenna is effective in assisting in the reception of both nearby and very distant stations.").

amounts of gain.<sup>15/</sup> As discussed below, antennas with gains equal to or greater than those specified in the original planning factors are readily available in the marketplace and widely used in outlying areas.

The FCC's observation about the use of enhanced reception equipment by viewers in near-fringe and outlying areas is confirmed from many sources. In its comments in this proceeding, for example, the Electronics Technicians Association, an organization of over 2,000 technicians who install both over-the-air antennas and satellite dishes, says this:

To get signals in rural areas "may require a higher gain antenna. . . . Common all-band antennas easily achieve four times or 12 dB gain over half-wavelength simple dipoles, cut for each channel. . . ."<sup>16/</sup>

"Regarding outlying or near-fringe area locations, the 'conventional rooftop antenna' requirements are greater. The SHVA . . . . should not limit the size, number of elements, number of bays, reflectors, directors, etc. commonly required for proper reception at distances or because of terrain problems."<sup>17/</sup>

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<sup>15/</sup> See Comparability for UHF Television: Final Report at 81 ("It appears that the planning factor value selected by the FCC for VHF receiving gain is correct. If anything, it underestimates system performance.") (emphasis added).

<sup>16/</sup> Comments of the Electronics Technicians Association, International, Inc. (filed Dec. 11, 1998) at 14 (emphasis added).

<sup>17/</sup> Id. at 24 (emphasis added).

"The difference in reception ability between a bare antenna -- of any style, length, etc. is vastly different from a system as commonly used in suburban and rural areas."<sup>18/</sup>

"[The] '4-bay UHF screen' antenna . . . and its 8-bay counterpart . . . are the conventional [outdoor] UHF antennas for fringe rural areas, used with a pre-amplifier and usually a rotor."<sup>19/</sup>

For outlying areas in which signal strength is relatively low, antenna manufacturers and installers universally recommend use of a large antenna, combined with a pre-amplifier to further boost signal strength. See Electronics Technicians Association Comments at 14-15; CEMA TV Antenna Manufacturer's Guide, [www.cemacity.org/cemacity/antenna\\_maps/V3-fin.htm](http://www.cemacity.org/cemacity/antenna_maps/V3-fin.htm) ("Large directional antennas are used in low signal areas for maximum possible signal reception. . . . They can be used in all map areas, but require an optional antenna mounted pre-amp and roof top mounting when used in [outlying] areas.") (emphasis added); Radio Shack Answers Catalog, 152 (1999) ("When to use an antenna-mounted TV/FM amplifier . . . [a]ntenna-mounted amplifiers are intended primarily for weak-signal 'fringe' areas") (emphasis in original). As discussed above, the Commission itself has repeatedly made the same point.<sup>20/</sup>

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<sup>18/</sup> Id. at 14 (emphasis added).

<sup>19/</sup> Id. at 23 (emphasis added).

<sup>20/</sup> See, e.g., In re Amendment of Parts 1, 63, and 76 of the Commission's Rules to Implement the Provisions of the Cable Communications Policy Act of 1984, FCC 88-128, 3 F.C.C. Rcd. 2617, ¶ 18 ("[p]ersons living in areas located in the outer reaches of the service areas of broadcast stations . . . can, and generally do, take relatively simple measures such as installation of an improved roof-top antenna . . . to enhance their off-the-air reception.") (emphasis added).

Even setting aside the major dB gains from use of pre-amplifiers, large directional antennas that are appropriate for use in outlying areas -- particularly in combination with separate UHF antennas, as recommended by the Electronics Technicians Association and the UHF Comparability Report<sup>21/</sup> -- have gains at least as large as those specified in the "low" figures provided by Hatfield & Dawson, and in some cases substantially larger.<sup>22/</sup> By spending \$114.52 to purchase a large, all-band antenna (e.g., the Winegard DS-7150), a household can boost its gains from a single antenna to 5.8, 9.7, and 11.15 dB.<sup>23/</sup> The gains from that \$114.52 antenna are

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<sup>21/</sup> See Comparability for UHF Television: Final Report at 49 ("clearly, a separate UHF-only antenna would provide superior performance"); id. at 52 ("[t]he advantages of the two antenna system are numerous").

<sup>22/</sup> The "low" figures that Hatfield & Dawson quote (3.5, 7.5, and 9.3 dBu for low VHF, high VHF, and UHF respectively) are from the UHF Comparability Report, which Hatfield & Dawson describe as "the most significant FCC analysis of the matter." H&D Eng. Statement at 4.

<sup>23/</sup> Winegard Web Site, <[www.winegard.com/offair3.html](http://www.winegard.com/offair3.html)>. By comparison, satellite dishes can cost vastly more. Radio Shack Answers Catalog, at 136-139. And, of course, satellite subscribers must *pay* every month for the network service they can receive for free over-the-air; current rates charged by satellite companies are about \$7/month for a package of network signals.

The relatively low costs of over-the-air reception equipment is particularly important because, as recognized in the Comments by Holston Valley Broadcasting Corp.:

DBS subscribers who are now receiving their network signals illegally via distant affiliates do not have to lose network programming. In most instances should they desire to continue to receive network service they simply must make the one time modest investment in the proper receiving equipment (antenna, mast, pre-amp, lead-in, etc.) rather than paying by the month for the illegal delivery of distant network affiliates via satellite. A reliable antenna in this market can be

(continued...)

2.2-2.3 dB better than the "low" figures cited by Hatfield & Dawson for VHF, and 1.85 dB better for UHF.<sup>24/</sup> Similarly, a \$129.99 all-channel antenna from Radio Shack (model VU-210-XR), offers 2.7 dB, 1.2 dB, and 1.9 dB more gain than Hatfield & Dawson's "low" figures for the three channel ranges.<sup>25/</sup>

For reception of UHF stations, by spending only another \$36.60 for a separate UHF antenna (e.g., Winegard DS-8050), a household can achieve average UHF gains of 12.3 dB, or a full 3 dB higher than Hatfield & Dawson's "low" figures.<sup>26/</sup> Even that figure is an underestimate: the Commission found in 1982 that a commercially-available Radio Shack 8-bay UHF antenna had a gain of 13.4 dB.<sup>27/</sup>

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<sup>23/</sup> (...continued)  
purchased for \$40 to \$130 (depending upon the distance from the transmitting site).

Comments of Holston Valley Broadcasting Corp. (Dec. 11, 1998), at 5 (emphasis added).

<sup>24/</sup> Even a medium-sized directional antenna has gains roughly equal to those specified in the UHF Comparability Report, and adopted by Hatfield & Dawson as their "low" figures. For example, Winegard sells a medium-sized all-band antenna for \$64.20 (DS-7088, [www.winegard.com/dsspecs.html](http://www.winegard.com/dsspecs.html)) with gains (3.5, 7.5, and 9.1) almost precisely those specified by Hatfield & Dawson as their "low" figures. By spending only another \$36.60 for a separate UHF antenna (Winegard DS-8050) -- for a total cost of only \$101 for the two antennas -- a household can achieve average UHF gains of 12.3 dB, or a full 3 dB higher than Hatfield & Dawson's "low" figures. Winegard Web Site, <[www.winegard.com/offair3.html](http://www.winegard.com/offair3.html)>.

<sup>25/</sup> The Radio Shack antenna offers 6.2 dB of gain for low VHF, 8.7 dB of gain for high VHF, and 11.1 dB of gain for UHF. See <[http://support.tandy.com/support\\_video/3924.htm](http://support.tandy.com/support_video/3924.htm)> (visited Dec. 17, 1998).

<sup>26/</sup> Winegard Web Site, [www.winegard.com/dsspecs.html](http://www.winegard.com/dsspecs.html).

<sup>27/</sup> In re Improvements to UHF Television Reception, FCC 82-333, 90 F.C.C.2d 1121 (released Aug. 6, 1982) at Appendix B. As discussed above, the Electronics Technicians (continued...)



4. **Line loss:** Hatfield & Dawson's "low" estimate for line losses -- 2, 3, and 6 dB for the three channel ranges -- are taken from the 1979/80 UHF Comparability Report. These figures are obsolete. As set forth in specifications published by a leading manufacturer of antennas and cables (Winegard), readily available RG-6 coaxial cable -- the cable that the UHF Comparability Report recommends for use in downloads -- has the following line losses for 50 feet of cable:

Low VHF:	0.7 to 0.95 dB
High VHF:	1.3 to 1.9 dB
UHF:	2.15 to 2.9 dB <sup>28/</sup>

Even if one rounded each of these ranges up to the next round number, these line loss dB figures would 1, 2, and 3 dB -- which is 1 to 3 dB better than the figures Hatfield & Dawson cite as their "low" estimates for line loss.

For their "high" estimate of Grade B intensity, Hatfield & Dawson add in 3 dB for a splitter as part of the line loss figure. As NAB's initial comments demonstrated, it is completely inappropriate to "split" a signal in two before measuring it: a household with an ambient field intensity of 47 dBu in the air above its rooftop is "capable of receiving a signal of

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<sup>27/</sup> (...continued)

Association's Comments state (at 23) that "[the] '4-bay UHF screen' antenna . . . and its 8-bay counterpart . . . are the conventional [outdoor] UHF antennas for fringe rural areas, used with a pre-amplifier and usually a rotor." (Emphasis added.)

<sup>28/</sup> Cohen Reply Engineering Statement, ¶ 8 ("Cohen Reply Eng. Statement") (calculated based on figures for 100 feet of cable published by Winegard, see <<http://www.winegard.com/cable.html#75ocut>>).

Grade B intensity [from a low VHF station] with a conventional outdoor rooftop receiving antenna," whether or not the household chooses to split the signal once it comes into the house. Moreover, amplifiers are readily and inexpensively available for those who wish to use a single rooftop antenna to serve more than one television set. See Cohen Eng. Statement ¶ 22; Cohen Reply Eng. Statement ¶ 9.

5. **Summary concerning Grade B planning factors.** If the Commission were to revisit the definition of "Grade B intensity" today, it would find -- as it effectively did earlier this year in the DTV proceeding, and as analysts have done again and again since the 1950s -- that the numbers originally established by the Commission remain fundamentally sound, because the "up" and "down" changes largely cancel one another out. Indeed, if the Commission took into account the use of preamplifiers, which are widely used in outlying areas -- and can readily add between 10 to 30 dB to signal strength in outlying areas<sup>29/</sup> --

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<sup>29/</sup> A preamplifier is "a device that is utilized in a receiving antenna system to increase the RF power of the desired signal delivered to the receiver. In a television receiving system, a preamplifier can improve overall system performance by both compensating for the decrease in signal strength (attenuation) caused by the transmission line and components, and by lowering the amount of noise, or snow, the receiving antenna system contributes to the displayed image." Comparability for UHF Television: Final Report at 73 (emphasis added). Because of these benefits, use of preamplifiers in outlying areas is common. See, e.g., id. at 78 ("Preamplifiers have historically been utilized in 'fringe' reception areas. . . ."); Electronics Technicians Ass'n Comments at 6 (noting that "virtually all rooftop antenna systems include a pre-amplifier" in author's rural county).

To illustrate the gains a consumer can realize through use of a preamplifier, in tests conducted by the UHF Comparability Task Force -- using a preamplifier chosen in part because of its relatively low price -- the end result of the amplifier (taking into account both the preamplifier's gain of 16 dB and internal noise factor of 3.7 dB) was an extra 12.3 dB received. See Comparability for UHF Television: Final Report at 75 n.18, 76 (Table 3-10, n.3). And

(continued...)

it would need to drastically reduce "Grade B" field intensities. Since the Commission has no authority to alter the central compromise enacted by Congress in Section 119, however, there is no reason for it to consider the matter in the context of this proceeding.

Moreover, comments by completely unaffiliated commenters confirm the validity of the Commission's current approach. For example, the Electronics Technicians Association, whose members install both satellite dishes and over-the-air antennas, reports that

With a proper antenna system, B contour households can receive crystal clear pictures (without ghosting) on multiple channels. Putnam County, Indiana B Contour households receive eighteen excellent quality channels in stormy, cloudy, snowy, and clear weather. Grade B signal level minimums which work for the broadcast community appear to have worked for these households over the years.<sup>29/</sup>

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<sup>29/</sup>

(...continued)

according to the Electronics Technicians Association, the gain on the preamplifier used by the Task Force was actually low; in fact, the typical gains with modern preamplifiers range from 17 dB to 24 dB. See Electronics Technicians Ass'n Comments at 14-15. See also Radio Shack Answers Catalog, at 152 (offering antenna-mounted amplifiers ranging in price from \$17.99 to \$59.99 with gains of 10 dB to 30 dB); Winegard Web Site ([www.winegard.com](http://www.winegard.com)) (offering series of preamplifiers ranging in price from \$67.38 to \$83.75 with gains of 17 to 29 dB).

<sup>30/</sup>

Electronics Technicians Ass'n Comments at 15.

**E.     Interference and Ghosting are Not a Matter of Insufficient Signal Strength and Are Irrelevant to the Definition of “Grade B Intensity”**

While interference and ghosting (multipath) may in some cases affect picture quality, they are not related to signal intensity. See, e.g., Supp. Expert Report of Jules Cohen (“Cohen Supp. Expert Report”), CBS Inc. v. PrimeTime 24, at ¶ 23 (May 29, 1998); H&E Comments, ¶ 10 n.3. Accordingly, even if the Commission had the authority to modify the definition of “Grade B intensity,” it could not (and it would not make any sense to) change the required minimum field intensities as a way to account for interference or ghosting. Indeed, even SBCA's own engineers acknowledge that “there has not been adequate information to establish numerical methods for . . . computations” relating to ghosting. H&D Eng. Statement, Appendix 4. And since the Commission has strict rules about channel spacing, interference is typically an issue only at the outer fringes of station coverage areas in any event.

Although not relevant to this proceeding, there are numerous self-help devices available to viewers to deal with both interference and ghosting. Use of an appropriate and correctly oriented antenna with high front-to-back ratios is a readily available antidote to interference, and properly orienting the antenna will also be generally effective in reducing ghosting. See Cohen Supp. Expert Report, at ¶¶ 21, 23; Antenna Specification Web Site, [www.members.aol.com/STARKELECT/cmaword.gif](http://www.members.aol.com/STARKELECT/cmaword.gif) (visited Dec. 15, 1998) (“When a reception area has ghosting [or] potential co-channel problems . . . QUANTUM is the best antenna to use”); <[www.supercalibrations.com/ antenna.htm](http://www.supercalibrations.com/antenna.htm)> (visited Dec. 15, 1998) (“The antenna must be aimed accurately. . . . Having the antenna pointed properly will minimize one of

the most common distortions in television: Ghosts!"); Winegard Web Site, [www.winegard.com/offair1.html](http://www.winegard.com/offair1.html) (visited Dec. 19, 1998) (offering "Ghost Killer" V/U Antenna for \$84.35).

## II. PREDICTING GRADE B INTENSITY

The Commission determined only a few months ago that use of the Longley-Rice model in the manner specified by the Commission's own engineering staff (in OET Bulletin 69) would accurately predict the actual service areas of analog television stations. Specifically, the Commission concluded that use of the standard Longley-Rice model to predict (and "replicate") analog and digital coverage areas would "ensure that *broadcasters have the ability to reach the audiences they now serve* and that *viewers have access to the stations that they can now receive over-the-air.*" In Re Advanced Television Stations and Their Impact Upon the Existing Television Broadcast Service, FCC 97-115, 12 F.C.C. Rcd. 14588, ¶ 29 (released April 21, 1997) (emphasis added); see id. at ¶ 90 (replication process "will preserve both *viewers' access to the existing stations in their market* and *stations' access to their existing populations of viewers*") (emphasis added).

The Commission's conclusions of a few months ago about the reliability of Longley-Rice remain perfectly valid today. Indeed, the Commission's confidence in its standard Longley-Rice model should only be increased by the wealth of empirical data that broadcasters have provided to the Commission in this proceeding. As discussed in NAB's initial comments, those data show that Longley-Rice run in the standard manner is an excellent predictor of actual

field intensity, as measured against real world field intensity measurements at more than 500 randomly selected locations in five markets. Notably, those five markets included one -- Charlotte -- that was selected as a representative market for testing by the Commission's Advisory Committee in the DTV proceeding and expressly endorsed by PrimeTime 24 as an "appropriate" locale for doing tests. See Expert Report of Jules Cohen, CBS Inc. v. PrimeTime 24, ¶ 25 (April 15, 1998) (quoting PrimeTime 24 filing).

As demonstrated in NAB's initial comments, because Section 119 of the Copyright Act requires satellite carriers to provide actual signal intensity measurements to meet their burden of proof, any predictive model suggested by the Commission would at most serve as nonbinding "advice" to the courts about how they might wish to fashion a remedy consistent with their equitable powers. Should the Commission wish to make such a suggestion to the courts (or to Congress), however, it should -- as the NPRM states (at ¶ 34) is its current intention -- endorse the standard Longley-Rice model as implemented by the Commission in the DTV proceeding.<sup>31/</sup>

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<sup>31/</sup> As mentioned in NAB's initial comments, for these purposes it does not make sense to cut off a station's predicted Longley-Rice propagation area at the traditional (and less accurate) Grade B contour. See In re Amendment of Parts 1, 63, and 76 of the Commission's Rules to Implement the Provisions of the Cable Communications Policy Act of 1984, FCC 88-128, 3 F.C.C. Rcd. 2617 ¶ 19 n.22 ("A television station's usable signal does not end abruptly at its predicted Grade B contour. Reception at a significant distance beyond the contour is possible for a variety of reasons including, for example, the presence of terrain more favorable to signal propagation than that assumed in the prediction rules . . . .").

**A.     The Satellite Carriers Have *No Data Whatsoever* To Support  
          Their Claims that Standard Longley-Rice is Inaccurate**

PrimeTime 24 and others in the satellite industry make numerous hyperbolic claims about the supposed inaccuracy of the standard Longley-Rice model and the claimed need to run Longley-Rice (or other terrain-sensitive models) with oddball inputs designed to shrink station coverage areas. See, e.g., SBCA Comments at 12-14; EchoStar Comments at 5-8; PrimeTime 24 Comments at 15-31. What is striking about these empirical theories is that the satellite companies are unable to provide any data whatsoever to support them. The Commission must not (and could not responsibly) jettison its established terrain-sensitive model in this rushed proceeding, based on completely unsupported speculation by parties seeking to excuse their lawbreaking.

The satellite industry's failure to provide any such data is itself revealing. PrimeTime 24 has known since 1996 that it would have the burden of proving (in three different lawsuits) that its customers are unserved. Yet in the three lawsuits, PrimeTime 24 has presented only a tiny handful of measurements, which have generally shown that the customers in question -- hand-picked by PrimeTime 24 itself, usually at great distances from the station transmitter -- are in fact able to receive a signal of Grade B intensity. See, e.g., ABC, Inc., 17 F. Supp.2d at 474. Having discovered that testing merely proves its own lawbreaking, PrimeTime 24 has done virtually none.

As a result, the satellite industry can offer no empirical support for its specious attack on the standard Longley-Rice model. Broadcasters, on the other hand, have provided

reams of evidence not only that Longley-Rice run in the standard way (using 50/50/50 inputs) is extremely accurate, but also that proposed changes to the standard model -- such as the bizarre 99/99/99 inputs sometimes suggested by EchoStar -- would cause an extraordinary shrinkage of stations' predicted viewing areas and populations.<sup>32/</sup> Since tests conducted by professional engineers at randomly selected satellite homes strongly confirm the accuracy of the standard Longley-Rice model, however, the Commission should not hesitate to recommend continued use of that model.

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<sup>32/</sup> EchoStar's radical proposal to run Longley-Rice with 99/99 inputs would have shocking results, "shrink[ing] the predicted Grade B service area to an area, on average, 78% *smaller* than the area predicted to receive a signal of at least *Grade A intensity*." Comments of Hearst-Argyle Television, Inc. (Dec. 11, 1998), at 20 (emphasis added). With regard to station losses from EchoStar's 99/99/99 proposal, see, e.g., Joint Comments of the Pappas Telecasting, Inc., Morris Network, Inc., and the Pikes Peak Broadcasting Co. (Dec. 11, 1998), at 8 (Station KMPH, Channel 26, Visalia, California: "EchoStar proposal would reduce the size of [KMPH's] exclusivity area by up to 93 percent, and reduce the population covered by that station's exclusivity rights by up to 98 percent"); id. at 8, n. 7 ("KPTM population would be reduced by 25.99%, KPTM area would be reduced by 78.99%."); Comments of the New Mexico Broadcasters Association (Dec. 11, 1998), at 8 n.9 (EchoStar proposal would reduce KOB population by 34.39% and area by 95.19%; KOBF population by 45.79% and area by 90.55%; KOBR population by 99.36% and area by 88.44%; KOAT population by 72.08% and area by 97.97%; KVIH population by 39.09% and area by 86.07%; KOCT population by 71.75% and area by 84.54%; KOVT population by 93.42% and area by 99.05%; KRQE population by 53.21% and area 97.31%; KBIM population by 92.29% and area by 86.79%; KASA population by 34.89% and area 95.14%); Comments of Hearst-Argyle Television, Inc. (Dec. 11, 1998), at 19 (Hearst-Argyle stations would lose on average more than 88% of their service areas, and approximately 60% of their served populations. KSBW-TV, Salinas, California, alone, would have a potential loss of more than 4.6 million viewers); Joint Comments of Cordillera Communications, Inc., Cosmos Broadcasting Corp., Cox Broadcasting, Inc., Independence Television Co. and Media General Broadcasting, Inc. (Dec. 11 1998), at 11-12 (WSB would lose 20.6% of its population; KTVU would lose 22.2% of its population; WFIE would lose 38.9% of its population; KAIT would lose 72.7% of its population); Comments of the Arkansas State Association (Dec. 11, 1998), at 6 ("The EchoStar proposal would reduce the size of ABA stations' exclusivity area by up to 88 percent, and reduce the population covered by an affiliate's exclusivity rights by up to 56 percent!").



In the remaining subsections, we discuss the satellite industry's proposals for use of various inappropriate inputs to Longley-Rice and its claim that the Commission should throw Longley-Rice overboard in favor of the TIREM model.

**B. "Location" Probability Is Irrelevant When Running Longley-Rice in Point-to-Point Mode With Respect to a Particular Household**

As the SBCA's engineers, Hatfield & Dawson, recognize, Longley-Rice does not require any "location variability" input when it is run in point-to-point mode with respect to particular locations.<sup>33/</sup> Since all parties agree that geocoding software is readily available and works well in determining the latitude and longitude of particular households,<sup>34/</sup> there is no reason Longley-Rice cannot be run in point-to-point mode. The issue of location variability is therefore irrelevant.<sup>35/</sup>

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<sup>33/</sup> H&D Eng. Statement at 10 ("location variability [should be] eliminated . . . when a well-engineered path is being treated in the point-to-point mode").

<sup>34/</sup> SBCA Comments at 17; DirecTV Comments at 22-23; PrimeTime 24 Comments at 15-16; H&D Eng. Statement at 10-11; see CBS Inc., 9 F. Supp.2d at 1342.

<sup>35/</sup> Cohen Reply Eng. Statement, ¶ 14. In any event, the empirical data provided by broadcasters from actual testing at more than 500 randomly selected sites show that use of standard 50% location probabilities results in highly accurate predictions. See Cohen Eng. Statement, ¶ 34.

**C. Any “Time” Probability Greater than 50% Would Be Double-Counting, Since the Definition of Grade B Intensity Already Includes a 90% Time Factor**

As the NPRM correctly points out (at ¶ 4 & n.16), the definition of Grade B intensity itself includes a margin of error designed to ensure that a location that receives a median signal of that intensity will be likely to receive an acceptable picture at least 90% of the time. For example, the 47 dBu figure for Grade B intensity for a low VHF station includes an extra 6 dB to ensure that a location with a median signal intensity of 47 dBu will be likely to receive the necessary signal strength (which is actually 41 dBu) 90% of the time. NPRM ¶ 4 & n.16.

Since a 90% time factor is already built into the definition of Grade B intensity, it would be double-counting to add another 90% factor into the predictive model. To do so would effectively increase the required time probability far above 90%, and would make “Grade B intensity” something different in kind than the Commission (or Congress) has ever understood. PrimeTime 24 itself expressly admits that use of a 90% time factor in a predictive model would be double-counting, and therefore agrees with broadcasters (and with the Commission’s standard practice) that a 50% time factor is appropriate. See PrimeTime 24 Comments at 21.

**D. There is No Need for an Artificially Inflated “Confidence” Input**

As a final way of shrinking station coverage areas, the chronic lawbreakers in the satellite industry urge the Commission to propose an extraordinarily high (90% or 95%) “confidence” factor. The Commission took no such extreme step in its recent determinations

about how to run the Longley-Rice predictive model to determine which viewers are actually able to receive which television stations, and there is no reason to do so now. (Tellingly, in its Denver complaint (at ¶ 57), EchoStar admits that a 50% confidence setting is appropriate.) Indeed, the empirical data gathered under the direction of Jules Cohen shows that the standard Longley-Rice model -- including the standard 50% "confidence" parameter -- performs very well as judged by the acid test of actual real-world measurements. See Cohen Eng. Statement, ¶¶ 34-37; Supplemental Expert Report of Jules Cohen, CBS Inc. v. PrimeTime 24, ¶¶ 29-33.

**E.     The "Error Code" Issue is a Non-Issue**

Perhaps not surprisingly, PrimeTime 24 urges the Commission to declare any household to be "unserved" if Longley-Rice delivers an "error code" with respect to that location. PrimeTime 24 Comments at 18-19. That is bad advice. First, the Commission recently considered -- and rejected -- a similar contention in the DTV proceeding. See In re Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, FCC 98-24, 13 F.C.C. Rcd. 7418, ¶ 178-81 (released Feb. 23, 1998). Second, the engineers who raised this issue in the DTV proceeding -- and on whom PrimeTime 24 relied in the ABC litigation in North Carolina -- now tell the Commission that it should ignore error codes and accept the results delivered by Longley-Rice with respect to such locations. See H&E Comments at ¶ 19 ("We recommend that the error message be ignored and that the field strength value returned by the L-R algorithm be used, anyway, as though the [error] warning were a 'false alarm.'").

**F.     **There is No Need to Adjust the  
Longley-Rice Model For Buildings and Vegetation****

PrimeTime 24, SBCA, and certain other satellite interests contend that the Commission's established predictive methodology should be discarded in favor of one that (supposedly) takes buildings and vegetation into account. As we have previously explained, however, the issue of buildings is a nonstarter, because tall buildings typically exist only within the city grade coverage areas of TV stations, where signals are vastly stronger than the Grade B minimums. And as to both buildings and vegetation, there is no industry agreement about any standardized way to implement any such software -- and certainly not time for the Commission to prudently evaluate the technical issues in this extraordinarily rushed proceeding.<sup>36/</sup> Finally, the lack of any need for modifications to the Commission's existing predictive model is shown by the fact that empirical testing has proven that model -- *without* "building and vegetation" adjustments -- to be highly accurate. See Cohen Eng. Statement, ¶¶ 32-37.

**G.     **The Commission Should Not Reject Longley-Rice in Favor of TIREM****

In its recent DTV proceeding, the Commission carefully considered -- and rejected -- the use of TIREM, rather than Longley-Rice, as a predictive model. See In re Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, FCC 98-24, 13 F.C.C. Rcd. 7418, ¶ 180 (released Feb. 23, 1998) ("We further note that other

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<sup>36/</sup> As discussed in detail in the Reply Comments of the ABC, CBS, Fox, and NBC Affiliate Associations, an inherent difficulty in developing such software is, of course, that the relevant data is constantly in flux. Buildings are constantly being torn down and erected. Vegetation itself is being ripped out and sometimes replanted, and, of course, is seasonal.

models, such as TIREM, are proprietary and can yield very different results depending upon their implementation. Accordingly, we are reaffirming our decision to use the Longley-Rice model.").

The satellite industry's arguments for TIREM, like their arguments for eccentric input parameters, are marked by a complete absence of empirical support. If TIREM were more accurate in predicting the actual signal intensities at the homes of satellite subscribers, the satellite industry could easily prove it with data, rather than speculation. Since standard Longley-Rice is an excellent predictive model, however, there is no need for the Commission to go down the path of evaluating TIREM and the "very different results" that it can deliver "depending on [its] implementation." Id.

We also note that independent engineers strongly support the use of Longley-Rice. In his comments, for example, Richard P. Biby of Biby Engineering Services states:

The Longley-Rice model is currently used for the allocation of digital television stations and for some land-mobile applications. The model is a clear de facto standard within the country. This engineering firm has used this model for some time and is very satisfied with the model's performance in the UHF and VHF frequencies, especially in comparison with other models in use.

Comments of Richard P. Biby at 3 (emphasis added).

SBCA's objectives in advocating TIREM -- whichever of the many versions of TIREM it supports -- are clear: to find yet another way of shrinking station coverage areas and taking more viewers away from free, local, over-the-air broadcasters. SBCA's engineers use the code words "tactical" and "conservative" (H&D Eng. Statement at 8) to describe the version of TIREM they prefer; in plain English, that can only mean that their favorite version of TIREM errs on the side of estimating a lack of coverage. But since the SHVA represents a careful balance between attempting to make signals available to truly unserved households and protecting the network-affiliate relationship, see NAB Initial Comments at 8-10, there is no justification for using a predictive methodology that is deliberately designed to put a thumb on the scale by underestimating station coverage. Rather, use of an accurate model that is not tilted either way -- such as the Commission's field-validated Longley-Rice model -- is mandated.

**III. THE IMPACT OF SBCA'S PROPOSED CHANGES TO DEFINING AND PREDICTING GRADE B INTENSITY WOULD BE CATASTROPHIC**

NAB's initial comments showed that the most startling change suggested in the NPRM -- raising "Grade B" signal intensities to nearly Grade A levels -- would have an enormously damaging impact on localism and the network/affiliate relationship. We illustrated that impact with charts and maps documenting the crippling losses of key viewers that stations would suffer if such a radical change were actually implemented.

The satellite industry proposals, astonishingly, go even beyond the radical suggestion contained in Paragraph 28 of the NPRM. That is, the companies that have been lawlessly stealing copyrighted broadcast programming for years ask the Commission not only to

raise Grade B signal intensities above the Grade A level, but to endorse a predictive methodology with bizarre (and double-counting) inputs designed to shrink station's predicted coverage areas still further.

To illustrate the combined impact of these outrageous proposals, we have arranged for a variety of analyses to be performed during the short period available for preparation of these Reply comments. Note that because of time constraints, these analyses do not reflect all of the damage that PrimeTime 24 and its allies would inflict on localism; that is, the analyses discussed here use Longley-Rice (rather than SBCA's version of TIREM) and do not include any purported adjustments for buildings or vegetation beyond those inherent in the Longley-Rice propagation model.<sup>37/</sup>

First, Decisionmark has prepared the maps reprinted after page 5 of these Reply Comments, which show graphically how the satellite industry would -- contrary to the experience of broadcasters, the public, and the Commission for 50 years -- treat most of the United States as "unserved" by over-the-air television. Specifically, a table prepared by Decisionmark shows that more than 80% of the populated land area in the United States, with 95 million people, would be

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<sup>37/</sup> The maps were created using the proposed dBu levels advocated by SBCA (70.75 dBu for low VHF, 76.5 dBu for high VHF, and 92.75 dBu for UHF), and with the following parameters: 50% location, 90% time, 90% confidence. As to the location factor, it would have been impracticable to run the maps on a point-to-point basis with respect to all 100 million U.S. television households; the maps therefore rely on centroids of very small cells.

considered to be “unserved” if the SBCA proposals were accepted. See Exhibit K. The losses would be still greater if it had been possible to calculate the full impact of SBCA's proposals.<sup>38/</sup>

Second, Dataworld has prepared maps for many of the stations discussed in our initial comments, showing the combined impact of the twin satellite industry attacks on localism. These maps (reprinted in Exhibit A) show just how crushing a blow the infringers in the satellite industry would have this Commission inflict on local, over-the-air television.

Third, the evidence provided in the initial round of Comments provides a particularly telling illustration of the absurdity of the satellite industry position. Specifically, as the attached maps show, the satellite industry proposal would treat Putnam County, Indiana (a “Grade B donut” area) as all or completely unserved by nearby Indianapolis stations such as WISH -- even though the President of the Electronics Technicians Association, who lives in Putman County, reports:

Putnam County, Indiana B Contour households receive  
eighteen excellent quality channels in stormy, cloudy,  
snowy, and clear weather. Grade B signal level  
minimums which work for the broadcast community

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<sup>38/</sup> The analysis done by William R. Meintel for the ABC, CBS, Fox, and NBC Affiliate Associations shows the impact of the SBCA proposal in a different way. Mr. Meintel's analysis looks at the average reduction in the number of stations (both network and independent) that would be deemed to be available to American television households under the SBCA approach as opposed to the Commission's standard approach. Mr. Meintel's analysis shows that the net reduction would be about 58%.



appear to have worked for these households over the years.<sup>39/</sup>

#### IV. MEASURING GRADE B INTENSITY

As expected, PrimeTime 24 and other satellite companies propose a variety of measurement schemes calculated to falsely show households as unserved. NAB rebutted almost all of these proposals in its initial comments. In this Reply, we respond to the new details the satellite industry has now added to its proposals, and provide the Commission with a few additional authorities showing why it should reject those proposals.

At the outset, we address PrimeTime 24's efforts to create confusion about the significance of the phrase "conventional outdoor rooftop receiving antenna" in Section 119(d)(10) of the Copyright Act. As PrimeTime 24 acknowledges, the particular antenna chosen to measure field strength is irrelevant, see PrimeTime 24 Comments at 7, because a properly conducted signal intensity test simply factors out the gains or losses from the antenna system being used as against a standard dipole. See Cohen Eng. Statement, ¶¶ 24-28; see also Electronics Technicians Ass'n Comments at 23 ("For purposes of signal . . . readings for the SHVA, any antenna gain must be subtracted from the resultant microvolt reading to ascertain the field strength that would be received on the reference dipole.").

Thus, what is critical is the ambient field intensity, which is present no matter what antenna might be introduced into the relevant space. The significance of the phrase

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Electronics Technicians Ass'n Comments at 15-16 (emphasis added).

“conventional outdoor rooftop receiving antenna” in Section 119, then, is not the particular type of antenna that should be used for a test, but rather the location of the antenna. By using the quoted phrase, Congress indicated that the relevant test was not signal intensity (i) at the location of indoor rabbit ears, (ii) at the location of an attic antenna, or -- to take the other extreme -- (iii) at the top of a 100 foot tower. Rather, the relevant test is the ambient field intensity available to a properly oriented antenna somewhat above the highest point of a home’s rooftop.

We next address the series of unscientific tricks that the satellite industry seeks to employ to make served households appear to be unserved. These ploys plainly fail the standard the Commission properly set forth in a similar context 10 years ago: “it is necessary that acceptable studies be conducted in a professional, scientific manner using a methodology that can reasonably be expected to measure the physical presence of a signal of Grade B or better quality and to yield similar results if replicated by another party.”<sup>40/</sup>

**A. Pointing the Antenna the Wrong Way**

We have already shown in our initial comments that correct orientation of the antenna (i.e., towards the strongest signal) is a fundamental aspect of signal measurements. The following points further support that basic principle:

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<sup>40/</sup> In re Amendment of Parts 1, 63, and 76 of the Commission's Rules to Implement the Provisions of the Cable Communications Policy Act of 1984, FCC 88-128, 3 F.C.C. Rcd. 2617 ¶ 40 (released April 29, 1988) (emphasis added).

First, the Commission itself has observed in its standard measurement regulation (Section 73.686), in the OTARD context discussed in our initial comments,<sup>41/</sup> and in other directly analogous circumstances, that correct antenna orientation is both necessary and commonplace. For example, the Commission found in 1988 that “persons living in areas located in the outer reaches of the service areas of broadcast stations (for example, at the edge of a predicted Grade B contour) can, and generally do, take relatively simple measures such as installation of an improved roof-top antenna and careful location and orientation of that antenna to enhance their off-the-air reception.”<sup>42/</sup>

Second, it is ironic indeed that the satellite industry would argue that over-the-air antennas should be pointed the wrong way for measurement purposes, when satellite antennas must be precisely aligned in order to receive any signal at all. Indeed, because C-band dishes must be pointed at different satellites in order to receive different channels, it is absolutely necessary for a C-band dish to be movable. The same logic should apply to each of these technologies: if transmitters are in different locations, the viewer needs to orient his or her receiving equipment properly to receive the relevant signals.

Third, the trade association of technicians who install both satellite dishes and over-the-air antennas has this to say on this topic:

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<sup>41/</sup> See In Re Lubliner, 13 F.C.C. Rcd. 4834 (Cable Services Bureau, released Oct. 14, 1997), application for review denied, FCC 98-201 (released Aug. 21, 1998).

<sup>42/</sup> In re Amendment of Parts 1, 63, and 76 of the Commission's Rules to Implement the Provisions of the Cable Communications Policy Act of 1984, FCC 88-128, 3 F.C.C. Rcd. 2617 ¶ 18 (emphasis added).

- “[T]his is what is required to perform a signal level measurement:  
. . . . Antenna oriented for maximum signal on channels in question . . . .” Electronics Technicians Association Comments at 21 (emphasis added).
- “In rural areas where broadcasters may be located in different directions and/or different cities, a rotor is desirable. . . . Most rural households opt for a rotor in order to achieve maximum reception capabilities.” *Id.* at 15 (emphasis added).
- “A rotator is as important as other factors in many areas of the country. . . . In our county (Putnam, Indiana) . . . [a] majority [of all rooftop antenna systems] . . . include a rotor. . . .” *Id.* at 6.
- “Rotors are as important in many areas as steering wheels are in automobiles. Because a household needs to reverse the antenna to get a signal 180 degrees from another should not be an excuse to pay \$600 over ten years to receive the signal via satellite instead of installing the proper antenna system.” *Id.* at 21 (emphasis added).
- “Does a conventional outdoor rooftop receiving antenna include a rotor? Yes, if stations are in different directions. . . . Rotors are economical (\$60-\$75) and they do not require constant rotation. They do allow aligning the outdoor antenna precisely at the direction of the television station. Antennas are directional due to the laws of physics.” *Id.* at 24 (emphasis added).

## **B. Use of Unknown/Defective Equipment**

SBCA's engineers, Hatfield & Dawson, blithely suggest that it would be possible to use a homeowner's own, completely unknown equipment to conduct signal intensity measurements. H&D Eng. Statement at 13. Astonishingly, they suggest that the measurements should be made based on the extraordinary (and obviously wrong) assumption that every household antenna in the United States has the same characteristics as set forth in H&D's proposed planning factors.<sup>43/</sup> That suggestion flies in the face of the Commission's longstanding regulations (which require use of a system of known characteristics);<sup>44/</sup> of the views of satellite industry engineers Richard L. Biby and Robert Culver (who repeatedly testified that unknown equipment cannot be used to measure signal intensity);<sup>45/</sup> and of common sense.

Using an unknown antenna and transmission line as a measuring device is like using any other unknown measuring device: a worthless exercise. As Jules Cohen has explained

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<sup>43/</sup> H&D Eng. Statement at 13 ("The calculation of appropriate set terminal signal (dBm) should be performed using the same assumptions as suggested for revised planning factors, including antenna gain, cable loss, and splitter loss, or actual data if available.") (emphasis added).

<sup>44/</sup> Indeed, the Commission considered and rejected a similar proposal for conducting field measurements in a proceeding regarding cable deregulation. There, one commenter recommended that measurements be accomplished by taking meter readings at the antenna input of television receivers connected to the outside antennas of actual residences. In rejecting that proposal, the Commission noted that "measurement of signals provided by consumers' outdoor antenna[s] . . . are less scientifically verifiable than the criteria we utilize in Section 73.686." In re Amendment of Parts 1, 63, and 76 of the Commission's Rules to Implement the Provisions of the Cable Communications Policy Act of 1984, FCC 84-1296, 3 F.C.C. Rcd 2617, ¶ 42 (released April 29, 1988).

<sup>45/</sup> See NAB Initial Comments at 46 n.26 (citing Biby and Culver testimony).

in detail in his Supplemental Expert Report in the CBS case, there are innumerable factors about a particular reception system -- *totally unrelated to ambient signal intensity* -- that can affect receiver voltage. And this concern is far from academic: as the Comments submitted in this proceeding confirm, many home antenna systems have been long unused, were poorly installed to begin with, or are in poor repair.<sup>46/</sup> Measurements taken with such equipment would be of no value: unless one knows all of the pertinent technical characteristics for a particular receiving installation,<sup>47/</sup> it is simply impossible to use it to determine whether signal intensity of the required strength is present.

**C. Use of Minimums (or Other Non-Median Data)**

In another effort to benefit from double-counting, however, the satellite industry argues that the controlling measurement should be not the median -- as is uniformly used for all other purposes -- but the second-lowest of 10 measurements, supposedly to build in "90% time

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<sup>46/</sup> See, e.g., Comments of Holston Valley Broadcasting Corp. (Dec. 11, 1998), at 3 ("We have learned that many DBS subscribers have never tried an outside rooftop antenna. Many have tried to receive our UHF station or one of the UHF translators using a VHF antenna. Many have split the signal numerous ways or have run it through a hundred feet or more of transmission line with no amplification."); Comments of WWNY-TV (Dec. 11, 1998), at 3 ("Most often where residents claim that they cannot receive the WWNY-TV signal over-the-air, they have attempted to do so without the benefit of an appropriate antenna, correctly installed and positioned."); Comments of KIEM-TV (Dec. 11, 1998), at 7 (same); Comments of KLAX-TV (Dec. 11, 1998), at 7 (same).

<sup>47/</sup> It would be inappropriate to use published specifications for the equipment used in a household's current antenna/transmission line setup, because damage to the equipment (such as crimping of the coaxial cable or deterioration of antenna elements) could result in characteristics different from those set forth in the specifications. Rather, it would be possible to use a homeowner's own equipment only if it had been empirically calibrated against a known antenna.

levels.” See, e.g., H&D Eng. Statement at 13. But as discussed above in connection with methods for predicting Grade B intensity, a 90% time factor is already built into the definition of Grade B intensity, through the addition of extra dB. See NPRM, ¶ 4 & n.16 (FCC added 6 dB as 90% time factor for low VHF channels). Building in a 90% time factor into the measurement method, on top of the 90% time factor already built into the definition of Grade B intensity, would be another exercise in double-counting.

**D.      Need for Notice to Other Side of Intent to Measure /  
Number of Locations at Which Measurements Made**

Although the satellite industry comments generally do not discuss the need for notice to the other side of a party's intent to test, substantial advance notice is clearly essential. As the Electronics Technicians' Association points out, and as would be obvious in any event, “like any other measurement[,], the SHVA tests are subject to cheating.” Electronics Technicians Ass'n Comments at 24. To allow unmonitored testing under any circumstances would be unwise; to allow it by companies that have already been determined to have willfully violated current law would be particularly so.

The choice of an atypical location at which to carry out measurements is an obvious way in which cheating (or inadvertent errors) could occur. As the Comments make clear, and as the Commission has long observed, a rational homeowner who wanted to receive over-the-air stations would chose to place an antenna at a favorable location, not an unfavorable

one.<sup>48/</sup> Yet under the SBCA proposal, the technician could choose a single site -- which might have been determined in advance to have unusually low signal intensity -- and take measurements only at that pre-selected site. Cf. In re Lubliner, FCC 98-201, at n.43 (important to “guard[] against an improper signal strength test in which the antenna is oriented (intentionally or inadvertently) in the worst possible direction for receiving the signal, thus giving a misleading result.”).

Even absent an ulterior motive, selection of a single point is inappropriate, as reflected by the Commission's long-standing insistence on either a 100-foot run (which gathers hundreds of data points) or a five-point cluster method. See 47 C.F.R. § 73.686. Indeed, when faced with a similar desire for a less costly measurement method 10 years ago, the Commission endorsed its five-point cluster method as an acceptable alternative to a 100-foot run, but rejected a variety of unorthodox proposals similar to those now advanced by the satellite industry. In re Amendment of Parts 1, 63, and 76 of the Commission's Rules to Implement the Provisions of the Cable Communications Policy Act of 1984, FCC 88-128, 3 F.C.C. Rcd. 2617 ¶ 41 (“we will permit field strength measurements to be made on a cluster basis”).

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<sup>48/</sup> See, e.g., H&E Comments, ¶ 7 (“[I]t is reasonable to expect the viewer to have installed the household antenna at a relatively attractive location in terms of reception . . . .”) (emphasis added); Fox Broadcasting Company Comments, at 5 n.5 (same); see In re Amendment of Parts 1, 63, and 76 of the Commission's Rules to Implement the Provisions of the Cable Communications Policy Act of 1984, FCC 88-128, 3 F.C.C. Rcd. 2617 ¶ 18 (“We also note that persons living in areas located in the outer reaches of the service areas of broadcast stations . . . can, and generally do, take relatively simple measures such as installation of an improved roof-top antenna and careful location and orientation of that antenna to enhance their off-the-air reception.”) (emphasis added). If anything, therefore, technicians should be directed to look for the best locations, not merely for random ones, since that is what a real-world installer would do.



The Commission should take three steps to prevent abuse in the selection of measurement locations. First, the Commission should reject the easily-abused “single point” proposal by the satellite industry, and -- if it chooses to recommend an alternative to the normally preferred 100-foot run -- endorse its standard five-point cluster method. Second, the Commission should endorse the 45-day advance notice provision already agreed to among broadcasters, Primestar, and Netlink. Third, the Commission should require that the five locations for testing be selected either in a strictly neutral manner (for example, before taking any measurements at the household) or based on testing to determine the best locations (since that is what real-life installers would do).

**E.     “Challenger Pays” As a Replacement for Statutory “Loser Pays”**

As a final effort to gut the Satellite Home Viewer Act, the satellite industry proposes that (a) the Commission endorse absurdly shrunken predictive maps (see above), and then (b) force the challenger -- not the loser -- to pay for testing.

The Commission cannot and should not endorse any such rule. In civil litigation, the question of who pays for a site measurement is already established by statute: it is the “loser,” i.e., the party whose position about the availability of a Grade B intensity signal was not borne out by the test. See 17 U.S.C. § 119(a)(9). Nothing that the Commission says could alter that statutory mandate.

Nor should the Commission suggest any such approach to Congress. The point of the loser-pays provision of the Act -- and of the broader loser-pays provision in force from late

1994 through 1996 -- is to encourage both sides to be reasonable in the positions they take. Cf. In re Amendment of Parts 1, 63, and 76 of the Commission's Rules to Implement the Provisions of the Cable Communications Policy Act of 1984, FCC 84-1296, 3 F.C.C. Rcd 2617, ¶ 51 (adopting loser-pays provision because "parties on both sides will have [an] incentive to carefully evaluate their likelihood of success . . . before an engineering study is undertaken."). The satellite industry's "challenger pays" proposal has a different purpose: to make it prohibitively expensive for broadcasters to regain viewers that have been erroneously predicted -- using grossly shrunken coverage areas -- not to be served.<sup>49/</sup> In other words, if a station contended that 100 households were in fact served, and proved that 100% of the tested subscribers in fact received Grade B signals, the satellite companies would pay for none of the tests, even though they were the "loser" with respect to 100% of them. That system would have the opposite effect as a loser-pays system: it would give satellite companies every incentive to

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<sup>49/</sup> Again, this is not an academic dispute. Under the current practice, broadcasters have found that most of the subscribers they challenge have been illegal. See, e.g., Comments of WWNY-TV (Dec. 11, 1998), at 3 ("[WWNY] has challenged hundreds of illegal distant network signals within the Grade B contour of WWNY-TV. In most instances in which the station has measured its signal strength at an individual home in question, that home has been able to receive the station's signal using a rooftop antenna. . . . Most often where residents claim that they cannot receive the WWNY-TV signal over-the-air, they have attempted to do so without the benefit of an appropriate antenna, correctly installed and positioned.") (emphasis added); Comments of KIEM-TV (Dec. 11, 1998), at 6 ("[KIEM] has investigated numerous instances, of illegal distant network signals. With relatively few exceptions, in every instance in which the station has measured its signal strength at an individual home in question, that home has been able to receive the station's signal using a rooftop antenna."); Comments of KLAX-TV (Dec. 11, 1998) at 7 (same with respect to station KLAX). Yet, under the satellite industry's proposal, although broadcasters were correct in these instances, they would nevertheless have to foot the bill for the testing.

be unreasonable, because there would be no economic downside to forcing a station to test an obviously served household. The Commission should reject that blatantly self-serving proposal.

**V. PRIMETIME 24'S CLAIMS OF LACK OF ECONOMIC HARM TO STATIONS ARE HOPELESSLY FLAWED**

PrimeTime 24 claims, as it has unsuccessfully argued in court,<sup>50/</sup> that local stations (and their networks) are not harmed by PrimeTime 24's lawless theft of served local viewers. See PrimeTime 24 Comments at 29-31. PrimeTime 24's arguments are based on bad science and miscitation of "facts."

For example, PrimeTime 24 (along with its expert, James Dertouzos) purport to quote the NAB 1996 *Television Financial Report* as showing that "the average station affiliated with a network spent a mere 3.7% of its total expenses on production." PrimeTime 24 Comments at 30 n.12; see Declaration of James N. Dertouzos, ¶ 5(d) n.2 (same). But that same Report shows, in the line immediately below the one cited by PrimeTime 24, that the average affiliate spent nearly \$3 million for its news department, which was 27.3% of the station's total expenses. Thus, the correct figure is not 3.7% percent but 31% (3.7% + 27.3%).

The purported regression analysis described by Mr. Dertouzos is similarly flawed. Mr. Dertouzos submitted the same analysis in the CBS case in Florida; in response, broadcasters provided the Court with (1) an analysis by Dr. Christopher Vellturo of National Economic

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<sup>50/</sup> See CBS Inc. v. PrimeTime 24, 9 F. Supp.2d at 1345 (finding that local station are harmed by PrimeTime 24 infringements); R&R at 46-51.

Research Associates (“NERA”) showing that the Dertouzos analysis does not remotely prove what it claims to prove, and (2) a study by Paul Bortz describing the many ways in which illegal satellite service harms networks and stations. Copies of both reports (slightly redacted in the case of the Bortz report to eliminate material subject to a protective order) are being filed as exhibits to these Reply Comments.

To claim that stations are not damaged by the satellite industry's illegal over-reaching flies in the face of common sense as well. As pointed out in the Comments of the New Mexico Broadcasters Association (at 10-11), “[t]he Commission itself has recognized, in a similar proceeding, that: ‘[d]iversion imposes economic harm on local broadcasters. . . . A drop of even a single rating point may represent a loss of 1/3 to 1/2 of a broadcaster's potential audience. Audience diversion translates directly into lost revenue for local broadcasters.’” Comments of the New Mexico Broadcasters Association (Dec. 11, 1998), at 10-11 (quoting Report and Order on Program Exclusivity, 3 FCC Rcd 5299 (1988) at ¶ 41) (emphasis added).

At jeopardy are the many invaluable services local stations provide for their communities. Stations, themselves, have pointed to the many community-based services they provide as well as the costs of providing those services and the devastating effect that would result from the satellite industry's attack on localism. For example, Hearst-Argyle points out in its comments (at 23), that station KMBC-TV, Kansas City, Missouri, is currently in the process of purchasing costly state-of-the-art weather related equipment, including Doppler radar, that is critical to its ability to service its community with accurate and timely information on tornados and other weather phenomenon that threaten the lives of its viewers. According to Hearst-

Argyle's comments: "KMBC is making a capital investment of more than \$900,000 to upgrade its weather-reporting facilities alone. It is difficult to see how stations such as KMBC could fund such capital-intensive endeavors if they were to lose only a fraction of the local advertising that is potentially at stake due to duplicative network programming delivered via satellite." *Id.* (emphasis added).<sup>51/</sup> Of course, coverage of impending dangerous weather is not limited to areas in a station's Grade A coverage; rather, local stations provide valuable -- and sometimes life-saving -- information to communities throughout their viewing area, including communities in their Grade B coverage area and beyond. For example:

Sacramento station, KXTV, . . . provides extensive coverage during severe weather conditions and other emergencies. During massive floods in 1992 and 1997, KXTV issued alerts and warnings aimed at specific communities outside its Grade A area in Sutter and Yuba Counties. The coverage also included detailed advisories on evacuation procedures and emergency rescues. During the devastating 1992 fires in the Stanislaus National Forest, alerts and warnings were issued to the Calaveras County communities of San Andreas, Mountain Ranch, Fricot City and Arnold. Comments of A.H. Belo Corporation, at 6.<sup>52/</sup>

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<sup>51/</sup> See also Comments of A.H. Belo Corporation, at 6 (Station WFAA "has installed an advanced radar weather system, 'DopplerNet,' which employs two Doppler radar facilities, one of which is owned by Belo. . . . This system enables WFAA-TV to provide detailed and comprehensive weather alerts and information throughout its current Grade B area.").

<sup>52/</sup> See also *id.* at 6-7 ("Hurricanes are of particular concern to the viewing area of Hampton, Virginia Station WVEC-TV. During previous hurricane seasons, and, most recently, during Hurricane Bonnie in August, 1998, the station provided continuous weather updates and emergency crawls, directing all of its reports and warnings to communities throughout its Grade B area, including those at the edges of its Grade A service area and beyond.").

As pointed out by one group of broadcasters: "Weather conditions . . . change rapidly. If the news/weather operations . . . are impaired due to loss of revenues, where should local viewers turn for up to date weather information: the transmission from a New York City affiliate?" Joint Comments of the Pappas Telecasting, Inc., Morris Network, Inc., and The Pikes Peak Broadcasting Company, at 14

In addition to weather coverage, stations have described many other community services they provide, including citizen outreach programs and community news broadcasts -- services that would be jeopardized if the satellite industry were allowed to trammel the Grade B standard.<sup>53/</sup> And, for some of these communities the danger of losing their community voice is further exacerbated because there is only one local station to provide these services. See, e.g.,

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<sup>53/</sup> See, e.g., Comments of KASW at 2 (describing community programs promoted by station, including career concepts program to convince children to complete their educations, employer-outreach program to encourage students to meet with potential employers, and promotion of important services available to the poor or elderly); Comments of A.H. Belo Corporation, at 7 ("KXTV, for instance, goes on location for newscasts and weather from outlying communities such as Placerville, Marysville and Nevada City."); id. ("Through its 'News Tour' and '13 Listens' features, WVEC-TV provides 'on location' coverage of news and events from market communities, including those in the Grade A and B fringe areas."); Joint Comments of the Pappas Telecasting, Inc., Morris Network, Inc., and The Pikes Peak Broadcasting Company, at 14 ("Nebraska Stations KHGI/KWNB provide over \$300,000 per year in community and public service announcements. Local school district events in Nebraska will not be advertised on a [satellite-imported distant] affiliate. Similarly, local merchants rely on advertisements on local stations, including local insertions placed in network programming, to attract customers and build their businesses. The local Reno auto dealership cannot afford to place ads on New York City affiliate stations in order to reach Nevada viewers."); Comments of Entravision Holdings, LLC, at 2 ("Entravision disseminates Spanish-language programming to, and serves the need of Hispanic individuals who rely on Entravision's stations not only for entertainment, but also for news and public affairs programming of importance to them. This specialized programming will suffer greatly from any expansion of the definition of 'unserved household' because the duplication of programming that would result from such an expansion would diminish the viewing audience of Entravision's stations.").

Joint Comments of the Pappas Telecasting, Inc., Morris Network, Inc., and The Pikes Peak Broadcasting Company, at 13-14 (“The viewers in Kearney, Nebraska have only one primary television station licensed to their community: if satellite importation of a distant affiliate undercuts the ability of that station to provide local programming, what are the local viewers to do?”). Further, for the many people who simply cannot afford satellite service and the monthly fees charged by satellite carriers, free over-the-air television programming from local affiliates is their only source of television programming. Yet, if the satellite carriers have their way, the network-affiliate system would be twisted into a national network system, leaving those lower-income viewers completely disenfranchised.<sup>54/</sup>

**VI. THE COMMISSION SHOULD NOT ENDORSE  
PRIMETIME 24'S PROPOSAL FOR CONGRESS TO  
ABOLISH THE “UNSERVED HOUSEHOLD” LIMITATION**

In its Comments, willful and repeated copyright infringer PrimeTime 24 urges the Commission to recommend to Congress still another profoundly unwise new proposal: to abolish the “unserved household” limitation, and instead to allow satellite companies to sell distant network signals to everyone. PrimeTime 24 Comments at 33-36. For households that are ineligible under current law, satellite companies would simply need to pay a somewhat higher,

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<sup>54/</sup> See, e.g., Comments of the New Mexico Broadcasters Association, at 12 (“Equally significant in the State of New Mexico, would be the impact on the ability of affiliates to maintain and support the extensive network of translators that provides free over-the-air service to rural residents disbursed throughout the 160,000 square miles of New Mexico. Indeed, a large percent of these rural viewer are low income, and for these viewers, who cannot afford cable TV or satellite services, this translator service provides the only video service these viewers can receive.”) (emphasis in original).

but still government-set, price. Thus, ineligible viewers would be free to purchase out-of-town network stations for all of the reasons for which they (unlawfully) do so now: to time-shift, to obtain out-of-town sports (without paying market prices for packages such as NFL Sunday Ticket), to avoid using an over-the-air antenna, and the like.

There is no justification for such a startling usurpation of property rights.

Congress and the Commission have uniformly, and correctly, concluded that it is contrary to the public interest to permit retransmission technologies (whether cable, OVS, or satellite) to import network programming that duplicates the programming available from local stations. Neither Congress nor the FCC has ever offered other retransmission technologies the option to violate that rule by paying a government-set fee. For example, neither Congress nor the FCC has ever mandated that local affiliates be required to permit cable systems to import duplicative network stations in violation of the network nonduplication rules -- whether for payment of a "surcharge" or otherwise.

The consistent refusal of Congress and the Commission to adopt such a radical approach is wise. Under the PrimeTime 24 approach, local stations would abrogate their responsibility to actually serve the local communities in their service area by providing a unique (to each market) mix of local, syndicated, and network programs. Instead, local network stations would be relegated to the role of collecting rents -- set by the government -- from third parties that have taken over the role of delivering network programming, and which have no regard or concern for localism and community public service obligations. In short, PrimeTime 24 would have Congress transform the over-the-air broadcast networks -- which deliver their programming



through local outlets across the country -- into a one-size-fits-all, generic national network such as USA, Nickelodeon, or the Family Channel. It is difficult to imagine a more potent attack on localism.

The payment of some government-set fee to local stations for violation of their rights could not possibly compensate for the destruction of the role of stations as the exclusive source of network programming for their viewers. As the CBS Inc. v. PrimeTime 24 court has observed, networks and their affiliated stations cooperate in innumerable ways in promoting and enhancing one another's programming -- ways that would be devastated by the PrimeTime 24 proposal. Over time, turning local stations into rent collectors -- rather than actual broadcasters - - would mean that the station were not adding value to either of their key economic customers: advertisers and the national networks. Nor, contrary to the Copyright Office's well-intentioned suggestion, is it plausible to expect abolition of the "unserved household" limitation to be merely a temporary step: once viewers have come to see bypassing their local stations as something to which they are entitled, the link between local network stations and their audiences will have been forever broken.

Abolition of the "unserved household" limitation would also hand satellite carriers enormous, and completely unjustified, competitive advantages over cable. First, satellite companies, unlike cable systems, would have no "must carry" obligation to deliver local broadcast stations to their customers. Second, satellite companies would have no obligation equivalent to the network nonduplication, syndicated exclusivity, and sports blackout rules that apply to cable: unlike cable systems, satellite companies could import distant network stations to

enable their viewers to time-shift or to watch sports events available only in distant cities. There is no justification whatsoever for bestowing such undeserved competitive advantages on satellite companies, particularly ones that have flagrantly violated the existing law.

**VII. THE COMMISSION'S NEW COMPETITION REPORT SHOWS THAT LOCAL-TO-LOCAL DELIVERY OF NETWORK STATIONS, AND EFFECTIVE USE OF OVER-THE-AIR ANTENNAS -- NOT AN ASSAULT ON LOCALISM -- IS THE PROPER SOLUTION**

Just a few days ago, the Commission released a summary of its Fifth Annual Report on Competition in Video Markets, along with separate comments from each Commissioner. Although the Commission may not lawfully use the SHVA to promote competition with cable in the retransmission of network signals -- since the SHVA was designed to do precisely the opposite -- the new Report shows that in any event, there is no need for the Commission to harm localism to help satellite companies compete with cable. Rather, the Report confirms that local-to-local satellite delivery, along with more aggressive use of existing and improved over-the-air antenna technology, will largely solve whatever remaining problems may exist relating to delivery of network programming to dish owners.

Among the key findings are these:

- “[C]onsumers report that the inability to provide local broadcast signals, pursuant to current copyright law, is a major drawback of DBS service.” Key Findings of the 1998 Report on Video Competition, at 2 (emphasis added).

- DBS and medium power satellite companies enjoyed a subscriber increase of “almost 43% since the *1997 Report*.” *Id.* at 4-5.
- “DirecTV and PrimeStar . . . are again among the 10 largest providers of multichannel video programming service.” *Id.* at 5.
- “The drop in local cable operators' dominance of this market is primarily due to the continued growth of DBS systems . . . .” Statement of Chairman William Kennard at 1.
- “[T]o promote competition . . . Congress should continue to consider whether to amend the Satellite Home Viewer Act to allow DBS providers to carry local broadcast signals.” *Id.* (emphasis added) .
- “In my view, the data tell a positive story about the development of multichannel video competition, particularly from [DBS] service. . . .” Separate Statement of Commissioner Ness at 1 (emphasis added).
- “Whether it is 'local into local' or consumer education and assistance with installation of rooftop antennas, the key is cooperation between terrestrial broadcasters and DBS providers. Success on this front could make DBS an even better substitute for cable for many Americans.” *Id.* (emphasis added).
- “*DBS is making dramatic gains presenting mounting competition to cable*. . . DBS subscribership has jumped by 2.2 million since June of 1997, an increase of 43%. . . . According to Paul Kagan Associates, 'DBS is on course to capture nearly two-thirds of all new multichannel subscriptions sold in the U.S.'” Dissenting Statement of Commissioner Harold Furchgott-Roth at 4.

- “To deal with the issue of local broadcast signals, DBS companies are now 'simply adding a separate advanced antenna to their satellite package' to 'give customers the local channels they want.' These 'powerful new antennae [are] capable of tapping local channels with a mere zap of a remote control.” Id. at 5.
- “DBS clearly is shaping up as the singularly most significant competitive alternative to cable. And, it is coming on strong. DBS subscribers increased by 40% last year. Two out of three new subscribers of multi-channel video chose DBS over cable. . . . DBS's future looks bright.” Separate Statement of Commissioner Michael Powell at 2-3.
- “The inability to offer local signals . . . [remains a barrier to breaking into this market].” Id. at 5 (emphasis added).
- “[I]f the up front costs of DBS continue to decline (and especially if DBS providers are able to provide local broadcast signals), an increasing number of consumers of large programming packages will find DBS and cable to be complete substitutes for each other.” Statement of Commissioner Gloria Tristani at 1 (emphasis added).

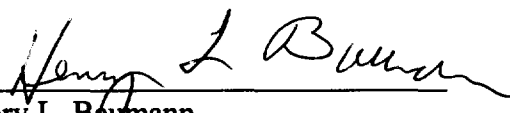
Significantly -- and appropriately -- these statements contain no suggestion that competition between cable and satellite requires any expansion of the areas in which satellite companies are permitted to deliver distant network affiliates to dish owners.

### **CONCLUSION**

Consistent with these comments, the Commission should recommend that Congress act quickly to approve an appropriate statutory and regulatory regime for local-to-local

delivery of broadcast stations by satellite companies. The Commission should also encourage satellite companies to help viewers acquire and use over-the-air antennas to pick up their local network stations -- as DirecTV, in conjunction with local phone companies, is doing today. See Wall Street Journal, Satellite TV Uses Antennae to Fight Cable Brethren (Dec. 1, 1998). For all of the reasons discussed in our initial Comments and these Reply Comments, however, the Commission should emphatically reject the invitation by the satellite industry to endanger and impair localism through delivery of distant network stations to served households.

Respectfully submitted,

  
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Dated: December 21, 1998

## **CERTIFICATE OF SERVICE**

I hereby certify that on this 21st day of December, 1998, I caused copies of the foregoing pleading to be served by hand delivery or by first-class mail to the following:

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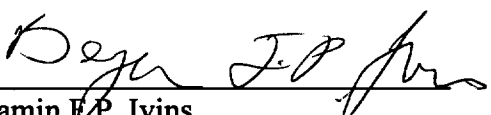
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